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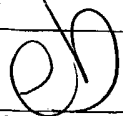
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/869,683	09/18/2001	Kimiyoshi Kitazawa	0038-0363P	8538
2292	7590	08/02/2004	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			ZACHARIA, RAMSEY E	
			ART UNIT	PAPER NUMBER

1773

DATE MAILED: 08/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/869,683	KITAZAWA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Ramsey Zacharia	1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 April 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3,5,6 and 8-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,6 and 8-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

#### *Claim Rejections - 35 USC § 102 / 103*

2. Claims 10 and 11 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Arakawa et al. (U.S. Patent 6,267,920).

Arakawa et al. teach a method of compressing wood such as lumber (column 1, lines 5-22). In one embodiment, the wood is compressed against a shaping jig (column 4, lines 35-55). This jig reads on a die as claimed. A vinyl monomer, i.e. functional additive, may be used to fill cracks and vacancies in the wood (column 6, lines 44-54). In the embodiment of Example 7, the flexural modulus is 12,300 N/mm<sup>2</sup>, i.e. 12,300 MPa (Table 2). Flexural modulus is taken to be flexural rigidity since modulus is a measure of stiffness.

Arakawa et al. do not teach all the process limitations recited in claims 10 and 11 such as: dry heating the lumber, forming the cracks and vacancies by pine weevils, and using a die having male and female sections. However, since claims 10 and 11 are product claims, these limitations are product-by-process type limitations. When the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claim in a product-by-process claim, the burden is on the applicant to present evidence from which the examiner could reasonably conclude that the claimed product differs in kind from those of the prior art. *In re Brown*, 459 F. 2d 531, 173 USPQ 685 (CCPA 1972); *In re Fessman*, 489 F. 2d 742, 180 USPQ

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324 (CCPA 1974). This burden is NOT discharged solely because the product was derived from a process not known to the prior art. *In re Fessman*, 489 F. 2d 742, 180 USPQ 324 (CCPA 1974). Furthermore, the determination of patentability for a product-by-process claim is based on the product itself and not on the method of production. If the product in the product-by-process claim is the same or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985) and MPEP § 2113. In this case, the resulting product of Arakawa et al. (i.e. compressed lumber having a flexural modulus of 12,300 MPa and vacancies filled with a functional additive) appears to be the same as that of claims 10 and 11. Therefore, the burden is on the applicant to conclusively demonstrate that the claimed product differs in kind from those of the prior art.

### ***Claim Rejections - 35 USC § 103***

3. Claims 5, 6, 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Viitaniemi et al. (U.S. Patent 5,685,353).

Viitaniemi et al. teach a method for compressive shaping of wood (column 1, lines 17-26). The wood is compressed within upper and lower compression plates, i.e. compressing dies (Figure 1 and column 1, lines 49-59). Moreover, Figure 1 illustrates that the ends of the wood are not in contact with the plates and therefore exposed to air. The wood may be coniferous wood, i.e. pine, or it may be deciduous wood compressed to 50% of its initial thickness (column 2, lines 59-63). The compressed wood is also heated while under compression (column 2, lines 25-32). The water content of the finished product is no more than 3% (column 2, lines 25-27).

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Since the wood used by Viitaniemi et al. is coniferous (i.e. pine), it is taken to have holes formed by pine weevils.

Regarding the flexural rigidity of claims 6 and 10, from Figure 7 in the instant application it appears that flexural rigidity is a function of water content. Since the water content of Viitaniemi et al. is no more than 3%, it should inherently have a flexural rigidity of 130 MPa or more.

Viitaniemi et al. do not teach using a die having male and female die sections. However, Viitaniemi et al. is directed to shaping of wood through the use of upper and lower compression surfaces. Therefore, it would be obvious to one skilled in the art to use a male upper compression surface and a female lower compression surface (or vice versa) in place of flat plates depending on the desired final shape of the wood.

4. Claims 1-3, 9, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Viitaniemi et al. (U.S. Patent 5,685,353) in view of Arakawa et al. (U.S. Patent 6,267,920).

Viitaniemi et al. teach or suggest all the limitations of claims 1-3, 9, and 11 as outlined above, except for the water content of the lumber prior to compressing and the use of a functional additive to fill holes in the wood.

Arakawa et al. is directed to a compressed lumber product (column 1, lines 5-22). Arakawa et al. disclose that compression is difficult unless the water content of the lumber is between 10-80% (column 3, line 66-column 4, line 9). Arakawa et al. also teach using a vinyl monomer, i.e. functional additive, to fill cracks and vacancies in the wood (column 6, lines 44-54).

One of ordinary skill would be motivated to use lumber having a water content as low as 10% as the wood of Viitaniemi et al. because such wood is easier to compress. Furthermore, one of ordinary skill would be motivated to use a functional additive to fill cracks and vacancies in the wood in applications wherein it is desired that the final product have a smooth finished surface.

Regarding the limitations of claim 3, the specific gravity is a function of the degree of compression that the lumber has undergone. Since the lumber of Viitaniemi et al. has been compressed to the same degree as that of the instant invention, i.e. 50%, it should have the same specific gravity.

#### ***Response to Arguments***

5. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Moreover the applicants' contention that Viitaniemi et al. do not compress the wood so that it stays in the compressed state permanently is not supported by the disclosure of Viitaniemi et al. which states that, while there is some (but not complete) recovery after the first stage of compression, the end product is compressed (see e.g. column 1, lines 17-22).

#### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramsey Zacharia whose telephone number is (571) 272-1518. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau, can be reached on (571) 272-1516. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**Ramsey Zacharia**  
Primary Examiner  
Tech Center 1700